

REMARKS:

Regarding the rejection of claims 1, 2, 4-9, 11 and 15 under 35 USC 103(a) in view of US 5728667 to Richter:

The applicants respectfully traverse the rejection which has been maintained by the Office based on the Richter prior art document.

As has been previously discussed, the Richter compositions are generally directed towards a “germicidal light-duty aqueous dishwashing detergent composition”. Richter’s dishwashing compositions necessarily include “a quaternary ammonium germicidal compound, an anionic alkyl ether carboxylate, a further nonionic surfactant, a suds boosting agent, as well as further optional additives”. One of appropriate skill in the art at the outset would realize that each of these are essential constituents, namely that all embodiments of Richter’s dishwashing detergents contain each of:

- a quaternary ammonium germicidal compound;
- an anionic alkyl ether carboxylate surfactant; and,
- further nonionic surfactant.

A glycoside surfactant is not described as being essential to the Richter compositions.

The applicant continues its traversal of the Office’s view that Richter’s recitation of glycosides amongst Richter’s description of a wide range of detergents which might be *optionally* included is sufficient and would encompass the applicant’s presently claimed invention. Again, the present applicants strongly disagree.

As is known to the art, a key technical problem facing formulators in this area is the provision of a cleaning and disinfecting effective composition which at the same time, is of low irritancy. Quaternary ammonium compounds, such as included in the applicant’s compositions are primarily known and used as disinfecting agents and have found widespread commercial use. However, these same quaternary ammonium compounds are also known to suffer the potential for irritation of the eyes, nose and other mucous tissues of the body. Ideally, a successful cleaning and disinfecting composition would also exhibit no real irritancy potential to end-users of a product. As the literature shows, the attainment of such a treble goal is non-trivial and is rarely successfully reached.

A key shortcoming in the Office's positions lies in the fact that a skilled formulator, faced with the Richter reference would produce a composition which would be successful to satisfy the treble goals of cleaning, disinfecting and minimal or no irritancy. While the Richter reference indicates,-- amongst a myriad of deterative compounds, glycosides – the applicant disagrees that such a mention would render the presently claimed invention obvious. It is believed fair to say that the broad and sweeping delineation of other deterative surfactants by Richter provides no teaching or suggestion of the identification of any of these materials on the basis of any irritation mitigating effect. As such, it is fair to analogize Richter's recitation to that of any of a number of well known chemical catalogs, such as *McCutcheon's Detergents and Emulsifiers*. That handbook/catalog too lists a wide range of surfactants and surfactant species but by its mere generality it too fails to provide any useful teaching or selection of specific surfactants, or how specific surfactants should be combined in order to reliably and predictably produce a composition having predetermined properties. Richter's recitation of his optional detergent compounds is similarly flawed; nowhere in the Richter specification is there any teaching or any suggestion whereby the skilled practitioner would select amongst the many possible nonionic surfactants with the *intent* of providing a useful mitigating effect to the quaternary ammonium compound present in those compositions.

The attention of the Office is again directed to the *Declaration of Robert Zhong Lu under 37 CFR 1.132* which has been previously transmitted to the Office, on 07.July.2000. That *Declaration* demonstrated various surfactants compositions, and their unpredictable effects on the final product formulation. Although each of these are individually mentioned in Richter's widespread recitation of nonionic surfactants, none are recited to be useful in providing any mitigating effect. Absent any specific teaching as to beneficial mitigating effects, each of these would also be equally likely to be used in a quaternary ammonium compound containing composition. However, as a comparison of the results of Table 3 illustrates, the effects of the inclusion of certain nonionic surfactants lead to surprising and unexpected results which could not in any way be discerned from the Richter reference, or from the general prior art. Clearly the *Declaration* illustrates that the important and significant results obtained require a

foreknowledge of the properties of alkylpolyglycosides and their beneficial effects in a formulation. Such is however wholly lacking as Richter fails to provide the requisite teaching or even the merest hint or suggestion to identify and utilize alkylpolyglycosides in a manner which becomes apparent only after the present inventor's discovery.

As to the proper standard of review, the Office is reminded again of the Court's holding in In re Antoine 195 USPQ 7, 8-9 (CCPA, 1977) and in the decision of in Gillette Co. v. S.C. Johnson & Son Inc. 16 USPQ2d 1923 (CAFC, 1990) which decisions have been already been discussed of record.

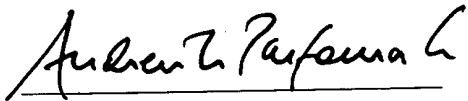
It is particularly relevant that Richter is silent as to the issue of mitigation. Nothing in the prior art Richter reference suggests or identifies specific surfactant and combinations of surfactants which would be useful to providing a mitigating effect. It is further significant when a fair reading of the Richter reference reveals that Richter focused upon providing effective "foaming" while preserving the germicidal efficacy. However, providing the technical effect of "foaming" is distinguishable from the technical effect of "mitigation". These very different technical effects do not have a common nexus, and therefore there would be little impetus for the skilled practitioner to view the Richter reference with the intent of finding anything which would suggest selection of a compound for improved mitigation where only detergency was cited and taught. Indeed, none of Richter's example compositions demonstrate a glycoside nonionic surfactant. Richter does not demonstrate any composition which is particularly proximate to those according to the present inventors. As such, it is not believed that the Richter composition can be properly viewed as teaching or suggesting the compositions according to the present invention, particularly in view of the arguments already presented of record.

Reconsideration of the propriety of the rejection based on U.S. Patent No. 5,728,667 to Richter, and withdrawal of the rejection, is respectfully requested.

Reconsideration of the bases of rejection in view of the amendments and remarks entered herein is respectfully requested. As the next communication, a *Notice of Allowance* is solicited.

Should the Office believe that telephonic communication would advance the prosecution of the instant application, they are invited to telephone the undersigned at the number given below.

Respectfully Submitted:

A handwritten signature in black ink, reading "Andrew N. Parfomak", with a horizontal line underneath.

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Enclosures - as indicated

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Appendix

No amendments have been entered to the specification.

No amendments have been entered to claims 1-15.

New claims 16 – 18 have been added as follows:

16.(New) An aqueous disinfecting and cleaning composition in a concentrated form which exhibits reduced irritancy according to claim 1 which consists essentially of:

a disinfecting effective amount of a quaternary ammonium compound having germicidal properties;

a mitigating effective amount of at least one nonionic surfactant selected from alkylpolyglycoside compounds;

0.1 – 8%wt. of at least one further nonionic surfactant;

0 - 3%wt. of a polymeric cationic surfactant based on a polyquaternary ammonium salt;

0 - 3%wt. of a builder;

0 - 5%wt. of one or more conventional additives selected from coloring agents, fragrances and fragrance solubilizers, viscosity modifying agents such as thickeners, pH adjusting agents and pH buffers including organic and inorganic salts; and,

water to form 100%wt. of the aqueous disinfecting and cleaning composition in concentrated form.

17.(New) An aqueous disinfecting and cleaning composition in a concentrated form which exhibits reduced irritancy according to claim 1 which consists essentially of:

a disinfecting effective amount of a quaternary ammonium compound having germicidal properties;

a mitigating effective amount of a binary surfactant system which comprises both (a) at least one nonionic surfactant selected from alkylpolyglycoside compounds, with (b) at least one further nonionic surfactant compound which is based on a polymeric alkylene oxide block copolymer;

0.1 – 8%wt of at least one further nonionic surfactant;

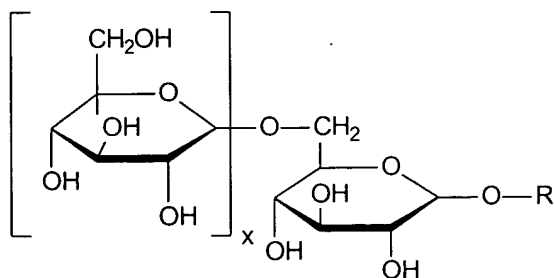
0 - 3%wt. of a polymeric cationic surfactant based on a polyquaternary ammonium salt;

0 - 3%wt. of a builder;

0 - 5%wt. of one or more conventional additives selected from coloring agents, fragrances and fragrance solubilizers, viscosity modifying agents such as thickeners, pH adjusting agents and pH buffers including organic and inorganic salts; and,

water to form 100%wt. of the aqueous disinfecting and cleaning composition in concentrated form.

- 18.(New) Aqueous disinfecting and cleaning composition in a concentrated form which exhibits reduced irritancy which consists essentially of:
- a disinfecting effective amount of a quaternary ammonium compound having germicidal properties;
- a mitigating effective amount of a binary surfactant system which comprises both (a) a first nonionic surfactant based on an alkylpolyglycoside compound according to the structure:



wherein R is an alkyl group, preferably a linear alkyl chain, which comprises C₈ to C₁₆ alkyl groups;

x is an integer value of from 0 – 3;

with (b) at least a second nonionic surfactant compound which is based on a polymeric alkylene oxide block copolymer;

0.1 - 10%wt. of at least one third nonionic surfactant;

0 - 3%wt. of a polymeric cationic surfactant based on a polyquaternary ammonium salt;

0 - 3%wt. of a builder;

0 - 5%wt. of one or more conventional additives selected from coloring agents, fragrances and fragrance solubilizers, viscosity modifying agents such as thickeners, pH adjusting agents and pH buffers including organic and inorganic salts; and,

the balance to 100% of water.